



**AMENDMENTS TO THE SPECIFICATION**

***Page 2, please replace the second full paragraph with the following new paragraph:***

The object is achieved by the following method steps with regard to the method:

- determining time intervals which in each case comprise at least twice the distortion time, the clock rate of the binary signal comprising an ~~integral~~ integer multiple of one time interval,
- detecting level changes of the distorted binary signal in the time intervals,
- determining level holding times of the distorted binary signal which in each case indicate how long a level remains unchanged within a time interval,
- restoring the binary signal in the time intervals
  - by transferring the detected level in the time intervals in which no level changes have taken place in the distorted binary signal, and
  - by transferring the detected level in the time intervals in which level changes have taken place, only when the respective level holding times reach a predeterminable value.

***Please replace the paragraph bridging pages 2-3 with the following  
new paragraph:***

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*B<sup>2</sup>* | It is advantageous that, in order to restore the binary signal, its Baud rate does not need to be known exactly to the receiving subscriber of an optical data transmission system. It is only necessary to set in the subscriber time intervals which, in each case, include at least twice the distortion time. This distortion time can be found in technical data sheets of optical waveguide transmission links. Furthermore, the clock rate of the binary signal must be set as an ~~integral~~-integer multiple of one time interval, as a result of which the level of the disturbed binary signal does not change at an ~~integral~~-integer multiple of a time interval and thus within a time interval in the case of a time distortion (shortening or elongation of the Low or High level). This "time segment", i.e. the level holding time within a time interval which indicates how long the level remains unchanged within a time interval, is weighted in such a manner that the level which is valid before or after the level change is set for restoring the binary signal in this time interval. In this arrangement, it is provided to transfer the level detected within this time interval only if the level holding time reaches a predeterminable value.

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***Page 3, please replace the first full paragraph with the following new paragraph:***

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In a practical exemplary embodiment of the invention, the time intervals are fixed at, in each case, approx. 83.33 ns on the basis of the technical data of the components and the maximum permissible lengths of the optical waveguides. The clock rates of the binary signals to be transmitted via optical waveguides are an ~~integral~~integer multiple of this time interval. Baud rates of 12 MB, 3 MB, 1.5 MB and 500 KB are provided in the example. In the case where the data clock rate of the binary signal is transmitted at 500 KB, a signal data bit comprises 24 time intervals of, in each case, 83.33 ns in undisturbed operation.